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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,600	11/19/2003	Shigetomo Tsujihata	Q78466	6440

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EXAMINER

SCHWARTZ, PAMELA R

ART UNIT PAPER NUMBER

1774

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/715,600

Applicant(s)

TSUJIHATA ET AL.

Examiner

Pamela R. Schwartz

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 July 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3 and 6-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. Claims 1, 3 and 6-10 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claims 1, 3 and 6-10 fail(s) to correspond in scope with that which applicant(s) regard as the invention can be found in the reply filed July 7, 2006 as well as in the specification and Declaration of October 14, 2005. In that paper, applicant has stated "the Comparative Example 3 in the specification (and in the Declaration) uses the same polymer as in Example 4 of Kojima et al and the Declaration shows significantly large differences in the rate of change of the density. Thus, Applicants have provided a comparison to the closest prior art to show that the present invention provides unexpectedly superior results over the prior art." This statement indicates that the invention is different from what is defined in the claim(s) because comparison of Example 1 and Comparative Example 3 indicates that the I/O value relied upon in the specification examples and showings is based upon the entire copolymer rather than Q. In contrast, claim 1 recites that "Q is at least one unit provided from a monomer having an ethylenic double bond, and represents a unit having an inorganic/organic ratio (I/O value) of less than 1 in an organic conceptual chart." Thus while the I/O value for "Q" in Comparative Example 3 should be the same as the value of Q for Example 1 if measured in accordance with claim 1 (i.e. it is the value for Q only), in the specification, the value is shown to vary with the ratio of Q to the remainder of the copolymer in the examples. Comparative Example 3, analyzed in accordance with the claim language, would appear to be within the scope of the claims.

While the claim is clear on its face, it is inconsistent with applicants' arguments, specification and showings in the declaration. Therefore, applicants' showings are considered unpersuasive as not commensurate with the scope of the claims. In rejecting the claims over the prior art, the claim language will be followed rather than the inconsistent disclosure of the specification and declaration. Clarification is required.

2. Claims 1, 3 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al. (4830911) and further in view of Sugiyama et al. (6,773,770). The primary reference discloses an ink jet recording sheet which is coated with a water soluble polymer as set forth at col. 2, line 58 to col. 3, line 18. Additional fractions of the polymer may include styrene (see col. 3, line 32-41) that inherently has an I/O ratio as required by applicants' claims. Pigment, including silica, binder, including polyvinyl alcohol, and a cross-linking agent for the binder may be present (see col. 4, line 4 to line 26). It is noted that claim 10 discloses process of formation steps, however, there is nothing of record to indicate that these steps will yield a medium structurally distinct from the set forth in the reference.

Sugiyama et al. disclose an ink jet recording material including in the ink receiving layer, pigment, binder, and a cationic resins having a cation equivalent of 1.5 to 6 meq/g (see the abstract). This cation equivalent is disclosed as enhancing the colored image-forming property and resistance to blotting (see col. 4, line 65 to col. 5, line 20). Cation equivalent is an inherent property of a cationic resin. Based upon the disclosure of the secondary reference and the reasons set forth therein for controlling the cation equivalent most preferably within the range of 2.5 to 4.0 meq/g, it would have

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been obvious to one of ordinary skill in the art to control the cation equivalent of the cationic resin of the primary reference to achieve these advantages. The polymers according to the reference that are the same as those recited by applicants' disclosure will have the required I/O value of the claims since this value is based upon chemical structure.

In addition, with respect to claim 9, it would have been obvious to one of ordinary skill in the art to include one or more cationic mordanting materials since the language of the primary reference discloses inclusion of one such material which naturally teaches to one of ordinary skill in the art that two such agents may also be used with the expectation of similar results.

3. Applicant's arguments filed July 7, 2006 have been fully considered but they are not persuasive. As set forth above, the claims appear to set forth an I/O value for Q only. Analyzing the showings in accordance with the claims, Comparative Example 3 is representative of the claimed invention. However, it is noted that the I/O value that the specification and declaration is relying upon to distinguish over the prior art, does not appear to be a value for Q alone. The examiner will reconsider both rejections and the showings once this issue has been clarified.

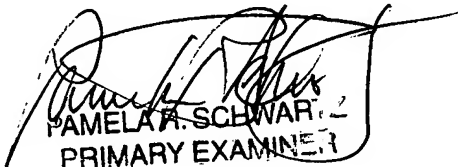
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela Schwartz whose telephone number is (571) 272-1528.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PRSchwartz  
September 5, 2006



PAMELA A. SCHWARTZ  
PRIMARY EXAMINER